

REMARKS

Status of Claims:

New claims 28-37 are added. Thus, claims 1-37 are present for examination.

Attorney Docket Number:

Applicant requests that the Attorney Docket Number be amended to be 025416-0204.

Obviousness Rejections:

Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stout et al. (U.S. Patent Number 4,922,339)(hereinafter Stout).

Claims 1-10, 21, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz (U.S. Patent Number 5,920,338) in view of Stout.

Claims 11-20, 22-23, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz, as modified by Stout, and further in view of Odle (U.S. Patent Number 5,491,511).

With respect to claims 1-27, as amended, the rejections are respectfully traversed.

Independent claim 1, as amended, recites a system for collecting and organizing data comprising:

“a video camera for capturing video images of transactions;

an input device for collecting transaction data associated with the transactions; and

a database management system for organizing the video images and the transaction data into a digital database;

wherein the video images are stored in the digital database as digital video images; and

wherein the digital video images are associated in the digital database with the transaction data such that the digital video images of a transaction can be retrieved based on the transaction data of the transaction.”

A system for collecting and organizing data including the above-quoted features has the advantage that video images of transactions are stored as digital video images in a digital database and the digital video images of a transaction are associated in the digital database with transaction data of the transaction such that the digital video images of the transaction can be retrieved based on the transaction data. The video images are stored as digital video images in the digital database (the same digital database that stores the transaction data). By storing the video images as digital video images in a digital database, a user may issue a specific search for a specific transaction and directly retrieve the digital video images for that specific transaction. Such a feature solves the inefficiency problem of the prior art tape systems where a user must use a VCR to fast forward or rewind a tape to locate the video images of a transaction. Storing digital video images in a digital database also allows for the elimination of the burden of recording, maintaining, transporting, and storing videotapes. (Specification; page 2, lines 1-19; page 4, lines 5-19).

Neither Stout, Katz, nor Odle, alone or in combination, disclose or suggest the system for collecting and organizing data including the above-quoted features with video images of a transaction stored as digital video images in a digital database where the digital video images are associated in the digital database with transaction data such that the digital video images of a transaction can be retrieved based on the transaction data of the transaction.

In Stout, a first signal from a camera and a second signal from a monitoring means are merged into a third signal which is sent to a video tape recorder (VTR) to be recorded. (Stout; column 3, lines 9-34; column 4, lines 5-11). Thus, the system in Stout stores camera images on a magnetic tape (such as VCR tape) and not as digital video images in a digital database. (Stout; column 4, lines 34-50; column 8, lines 20-26). As a result, in Stout, there is no way to retrieve digital video images of a transaction based on transaction data of the transaction. Instead, a user must use a VTR to fast forward or rewind a magnetic tape to locate an image, which is exactly

the problem that is solved by the system for collecting and organizing data including the above-quoted features.

As for Katz, the Examiner stated that “Katz fails to clearly disclose or suggest that a single database is used to store both the video image of the transaction and the transaction data.” Indeed, the recording systems disclosed in Katz include a transaction database 14 for storing transaction data that is separate from a recording device 22 for storing video signals. (Katz; figures 1, 2, and 3, reference numbers 14 and 22; column 4, line 35 to column 5, line 33). Then, in Katz, a synchronizing signal must be recorded by both the transaction database and the recording device. (Katz; column 4, line 53 to column 5, line 33). The Examiner points to Stout as a way to modify Katz, and states that “[i]n view of Stout et al’s teachings, it would have been obvious for a person of ordinary skill in the art at the time the invention was made to employ a single database for storing both the image of the transaction in [and] the transaction data for [to] provide rapid access to both data.” (Emphasis Added).

However, it would not have been obvious to modify the system in Katz using the system in Stout because the system in Katz seeks to provide a surveillance system which can store and replay information which is not generated contemporaneously. (Katz; abstract). Katz recognizes that in some point-of-sale systems, the behavioral events occur before the transaction data is generated and, thus, the transaction information cannot be recorded synchronously with the video pictures of the transaction. (Katz; abstract; column 2, lines 28-37). In contrast, the system in Stout relies on the fact that a first signal from a camera and a second signal from a monitoring means are combined into a third signal that represents a synchronized record of both the visual and informational components. (Stout; column 3, lines 9-34). Katz recognized such a problem and an object of the invention in Katz was to provide an asynchronous surveillance system. (Katz; column 2, lines 27-38 and 40-43).

Also, the system in Katz seeks to resolve the problem that when transaction data is recorded with a video image as a composite video signal, the overlay of the transaction data on the image may obscure an important part of the video image and may degrade the clarity of the

resultant video image. (Katz; column 1, line 20 to column 2, line 22). Thus, it would not have been obvious to modify Katz with Stout to record a video image and transaction data together on a video tape as a composite video signal, because that would result in the image being obscured and would also result in a degradation of the clarity of the image, which are the exact problems that Katz seeks to solve.

Moreover, the system in Katz does not allow for the digital video images of a transaction to be retrieved based on the transaction data of the transaction. The system in Katz can “look into the future” and display a warning message to the operator that a particular anomaly or transaction will occur in X number of frames or in X number of minutes. (Katz; column 7, lines 55-60; column 10, lines 35-39). However, the operator must then fast forward or rewind the tape to locate the images for the particular transaction and cannot simply retrieve the images based on the transaction data. (Katz; column 8, lines 1-5).

The system in Odle stores video images using a videotape in a video cassette recorder (VCR). (Odle; column 5, lines 29-31; column 6, lines 36-41). Thus, the video images in Odle are not stored as digital video images in a digital database. Furthermore, in order to allow for searches to be performed on transaction data, the system in Odle requires that the transaction data be stored in a digital data storage 30 that is separate from the video storage 20 where a mixed composite video signal is stored. (Odle; figures 3B and 3C, reference numbers 20 and 30; column 6, lines 36-58). Thus, Odle does not teach how to use a database for retrieving digital video images based on transaction data.

Therefore, independent claim 1, as amended, is neither disclosed nor suggested by the cited prior art and, hence, is believed to be allowable.

Because they depend from claim 1, claims 2-11 and 28-31 are believed to be allowable for at least the same reasons indicated above with regard to claim 1, and for additional reasons as evident from the language of the claims.

New claims 28-31 are dependent on claim 1 and provide further distinctions over the cited references.

New dependent claim 28 recites the system of claim 1,

“wherein the database management system includes a computer for determining whether a first transaction occurred during a first time period; and

wherein a first video image captured during the first time period is saved in the digital database in response to a determination that the first transaction occurred during the first time period.”

A system for collecting and organizing data including the above-quoted features expands on the advantage of storing images as digital images by saving a first video image captured during a first time period in a digital database in response to a determination that a first transaction occurred during the first time period. Thus, the system can conserve memory space by only saving video images that are of some value. The value of an image is determined by checking to see if a transaction occurred when the image was captured. (Specification; page 19, lines 1-12; figure 6, reference numbers S61, S68, and S63).

Neither Stout, Katz, nor Odle, alone or in combination, disclose or suggest the system for collecting and organizing data including the above-quoted features where a first video image captured during a first time period is saved in a digital database in response to a determination that a first transaction occurred during the first time period. In Stout, a video tape recorder (VTR) can be controlled so as to record continuously, intermittently, or for any desired periods. (Stout; column 8, lines 23-24). However, in Stout, once a camera image is captured, it is recorded by the VTR regardless of whether or not a transaction occurred during a time period when the image was captured. Thus, the video image is saved even when no transaction occurs during the time period.

Similarly, in Katz, VCRs record behavioral events even before transaction data is generated. (Katz; abstract). If a transaction does not occur, the behavioral events are still saved and, thus, the system in Katz requires a large amount of storage. As a result, the system in Katz

is designed with multiple VCRs that can provide 24 hour coverage with each VCR recording eight hours of behavioral events. (Katz; figure 4; column 5, lines 33-45). Finally, in Odle, even when no transaction data is available at a given time, a camera video signal is still recorded by itself. (Odle; column 6, lines 29-35).

Therefore, new dependent claim 28 is neither disclosed nor suggested by the cited prior art and, hence, is believed to be allowable.

New dependent claim 29 recites the system of claim 1,

“wherein video images and transaction data are stored in the digital database for each of a plurality of transactions;

wherein the database management system may receive a query to search for a first subset of transaction data that have a particular characteristic; and

wherein a first subset of video images that are associated with the first subset of transaction data can be retrieved by the database management system and be arranged to be displayed in an order in response to the query.”

A system for collecting and organizing data including the above-quoted features expands on the advantage of storing images as digital images by allowing for a database management system to receive a query to search for a first subset of transaction data that have a particular characteristic, and then retrieve and arrange to be displayed in an order a first subset of video images that are associated with the first subset of transaction data. Thus, a user could search for transactions having a particular characteristic (such as an unusual occurrence, a class mis-match, or a violation), and then view in an order all of the video images associated with those transactions. This can be done with stored digital video images, because the images can be displayed in any order and a subset of the images can be selected without having to fast forward or rewind over intervening images. (Specification; page 28, lines 1-3).

Neither Stout, Katz, nor Odle, alone or in combination, disclose or suggest the system for collecting and organizing data including the above-quoted features. The systems in Stout, Katz, and Odle only focus on the viewing of images on a videotape where a VCR is required to fast

forward and rewind the tape, and the VCR is not able to arrange a subset of the images in an order. There is no method disclosed in the references for retrieving a subset of video images and displaying the subset of images in an order. In Stout, the video images are only replayed later as recorded. (Stout; column 8, lines 25-26). In Katz, transaction data can be used to “look into the future” and display a warning message that a particular anomaly will occur in X number of frames, but there is no way to go directly to that frame or to select all frames with an anomaly and arrange them in an order. (Katz; column 10; lines 34-38). In Odle, a VCR is only used to locate a portion of a videotape with a given date and time stamp generated by the VCR, and there is no way to retrieve a subset of images based on a particular characteristic and arrange the subset in an order. (Odle; column 6, lines 59-62).

Therefore, new dependent claim 29 is neither disclosed nor suggested by the cited prior art and, hence, is believed to be allowable.

Independent claim 12 recites a method of creating a transaction based database similar to the system for collecting and organizing data of claim 1 and, thus, is believed to be allowable for at least the same reasons that claim 1 is believed to be allowable.

Because they depend from claim 12, claims 13-20 are believed to be allowable for at least the same reasons indicated above with regard to claim 12, and for additional reasons as evident from the language of the claims.

Independent claim 21 recites a system for collecting data about a transaction similar to the system for collecting and organizing data of claim 1 and, thus, is believed to be allowable for at least the same reasons that claim 1 is believed to be allowable.

Because they depend from claim 21, claims 22-23 are believed to be allowable for at least the same reasons indicated above with regard to claim 21, and for additional reasons as evident from the language of the claims.

Independent claim 24, as amended, recites a database system comprising;

“a camera for capturing a first and a second image, the first and the second image related to a first transaction;

a generator for generating an identifier; and

a storage medium for storing the first and the second image wherein the first and the second image are associated via the identifier.”

A database system including the above-quoted features has the advantage that a first and a second image for a first transaction may be associated by an identifier. Thus, for example, if a two axle vehicle passes through a sensor at a toll station and a first image is captured when the first axle passes a sensor and a second image is captured when the second axle passes the sensor, the two images can be associated via an identifier. Also, in a bank setting, if a customer passes a check to a bank teller and then the teller hands some money to the customer, a first image could be captured of the check and then a second image captured of the money and the two images could be associated together by an identifier for later auditing. (Specification; page 15, line 18 to page 16, line 6; page 29, line 6 to page 30, line 6).

Neither Stout, Katz, nor Odle, alone or in combination, disclose or suggest the database system including the above-quoted features where a first and a second image of a first transaction can be associated together via an identifier. In Stout, a video signal is recorded by a video tape recorder, and there is no teaching to associate two images of a single transaction with each other. (Stout; column 4, lines 5-11). In Katz, the video images are only marked with synchronization data (such as date and time), and there is no teaching to associate two images of a single transaction with each other via an identifier. (Katz; column 9, lines 44-65). Similarly, in Odle, individual portions of a videotape are identified with a system pointer (such as date and time), and there is no teaching to associate two images of a single transaction with each other via an identifier. (Odle; column 6, lines 45-65).

Therefore, independent claim 24 is neither disclosed nor suggested by the cited prior art and, hence, is believed to be allowable.

Because they depend from claim 24, claims 25-27 are believed to be allowable for at least the same reasons indicated above with regard to claim 24, and for additional reasons as evident from the language of the claims.

New independent claim 32 recites a method for creating a transaction based database similar to the system for collecting and organizing data of dependent claim 28, but claim 32 does not require that the video images be stored as digital video images in a digital database. Therefore, claim 32 is believed to be allowable for at least the same reasons discussed above with reference to claim 28 regarding the advantage of saving a video image captured during a time period in a database in response to a determination that a transaction occurred during the time period.

Because they depend from claim 32, claims 33-34 are believed to be allowable for at least the same reasons indicated above with regard to claim 32, and for additional reasons as evident from the language of the claims.

New independent claim 35 recites a method for displaying video images related to transactions similar to the system for collecting and organizing data of dependent claim 29, but claim 35 does not require that the video images be stored as digital video images in a digital database. Therefore, claim 35 is believed to be allowable for at least the same reasons discussed above with reference to claim 29 regarding the advantage of allowing for a database management system to receive a query to search for a first subset of transaction data that have a particular characteristic, and then retrieving and arranging to be displayed in an order a first subset of video images that are associated with the first subset of transaction data.

Because they depend from claim 35, claims 36-37 are believed to be allowable for at least the same reasons indicated above with regard to claim 35, and for additional reasons as evident from the language of the claims.

Conclusion:

Applicant believes that the present application is now in condition for allowance.
Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-0872. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-0872. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-0872.

Respectfully submitted,

Date: November 19, 2004

FOLEY & LARDNER LLP

Customer Number: 23392

Telephone: (310) 975-7963

Facsimile: (310) 557-8475

By: 

Ted R. Rittmaster

Attorney for Applicant

Registration No. 32,933